

# **Cloud Virtual Machine**

## **Purchase Guide**

### **Product Documentation**



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# Purchase Guide

## Billing Overview

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You can use the [CVM Price Calculator](#) to estimate the total price of instances you want to purchase, and place the order together.

### Note:

To ensure that you obtain accurate prices, please log in first.

## Billing Modes

Tencent Cloud offers four types of CVM purchasing options: monthly subscription, reserved instance, pay-as-you-go, and spot instance, and each tailored to meet user needs in various scenarios. For details, refer to [Billing Modes](#).

## Instance

The instance model determines the hardware configuration of its host. Every model has different computing and storage capacities. You can choose the computing capacity, storage space, and network access method for the instances that best suits your service scale.

Tencent Cloud provides various CVM models with different hardware specifications. For details, see [Instance Types](#). For more information about instance prices, see [Billing Mode](#).

## Storage

Tencent Cloud provides a wide range of data storage devices for CVM instances. Different storage types have different price and performance. They are categorized as follows:

Use case: System disk and data disk.

Architecture: Cloud disk, local disk and COS bucket.

Tencent Cloud now provides multiple [types of cloud disks](#), including Premium Cloud Storage, Balanced SSD, SSD, Enhanced SSD and ultra SSD. The billing modes include prepaid subscriptions, pay-as-you-go and spot.

For more information about disk prices, see [Pricing List](#).

## Network Bandwidth

Tencent Cloud provides high-quality multi-line BGP networks to ensure optimal network experience. Two billing options are available: Bill-by-traffic and bill-by-bandwidth.

Bill-by-bandwidth: Billed based on the public network transmission rate (in Mbps). It's applicable to scenarios with the bandwidth utilization over 10%.

Bill-by-traffic: Billed based on the total size of data transmission (in GB). It's applicable to scenarios with the bandwidth utilization lower than 10%.

For more information about the network billing mode, see [Public Network Billing](#).

## Image

Check below for the billing details of images. For more information, see [Billing Description](#).

Image Type	Description
Public image	It includes open-source images and commercial images. You do not need to pay for licenses when you use open-source images. You will be charged for licenses to use commercial images.
Custom image	The billing consists of the following two parts: Snapshot fee: The image use the CBS snapshot service. As a result, retaining custom images incurs a snapshot fee. A 80 GB <a href="#">free tier</a> is provided for Chinese regions For billing details of CBS service, see <a href="#">Billing Overview</a> . Image fee: If the custom image is sourced from a paid image, using it incurs fees.
Shared image	A shared image is a custom image shared from another Tencent Cloud account. If the shared image is sourced from a paid image, using it incurs fees.

# Purchasing Instances

## Billing Mode

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Tencent Cloud offers four types of cloud server purchasing options: monthly packages, pay-as-you-go, spot instances, and reserved instances, each meeting different users' needs in various scenarios.

The table below delineates the differences among these four billing modes:

Instance Billing Mode	Monthly Subscription	Pay-as-You-Go	Spot Instance	Reserved Instance
Payment method	Prepaid	<a href="#">Amount freezing</a> upon purchase, billed hourly	<a href="#">Amount freezing</a> upon purchase, billed hourly	Prepaid
Billing unit	USD/month	USD/second	USD/second	USD/year
Unit price	Relatively lower	Relatively higher	The price fluctuates. In most cases, the price is about 10-20% of the price of a pay-as-you-go instance with the same specifications.	Relatively lower
Minimal use time	Used for at least one month	Charged by the second and billed by the hour. Purchase and release at any time.	Charged by the second and billed by the hour. Purchase and release at any time. May be repossessed by the system.	One year
Changing instance configurations	Perform configuration adjustment. Each CVM instance can be upgraded with unlimited number of times	No limit. Change at any time.	Not supported.	Not supported.

	and downgraded for up to 5 times			
Use case	Suitable for businesses with stable and long-term device demands	Suitable for scenarios where the demand for devices fluctuates significantly in an instant, such as flash sale campaigns on an ecommerce site.	Suitable for scenarios such as big data computing and online website service using load balancing.	Suitable for businesses with stable and long-term device demands as a discount of pay-as-you-go instances with both high flexibility and cost performance.
Conversion of billing modes	Not supported	Possible to convert into monthly subscription. For details, please see <a href="#">conversion from pay-as-you-go to monthly subscription</a> .	Not supported	Not supported

## Monthly Subscription

Monthly subscription is a type of prepaid billing mode for CVM instances. You can pay the fees for one or multiple months or even years in advance. This mode is suitable for scenarios with predictable demand. The pricing for monthly subscription instances is more cost-effective than that for pay-as-you-go instances. For detailed pricing of the monthly subscription CVM, see [pricing overview](#).

In the case of a monthly subscription CVM instance, you must pay before usage. During the purchase, the system deducts the corresponding fees from your account according to the resources (CPU, memory, and data disks) and network fees. The sum deducted due to the purchase of CVMs = the number of CVM instances you apply for \* the unit price of a CVM instance. Therefore, before the purchase, you can check the balance of your account. If your balance is less than the total sum to be deducted, please top up before the purchase.

## Pay-as-You-Go

Pay as you go is a flexible billing plan for CVM instances. You can activate and terminate a CVM instance at any time. You only need to pay for what you use accurate down to **second** with no upfront payment required. Pay-as-you-go

resources will be billed on the hour. This billing plan is suitable for use cases where the business demand fluctuates greatly, such as ecommerce flash sales.

When you activate a pay-as-you-go CVM instance, an hour's charge (including charges for the CPU, the memory, and the data disks) will be frozen in your account balance as a deposit. You will then be billed by the hour (Beijing time) for your usage over the past hour. When you purchase a CVM instance, the price will be listed as an hourly fee. However, you will actually be **billed by the second** and the charge will be rounded to the nearest two decimal places. Billing starts from the second the instance is created and stops the second the instance is terminated.

When a pay-as-you-go CVM instance is created, an hour's charge will be frozen in your account balance as a deposit. When you change the CVM configurations, the current deposit will be released and a new deposit will be frozen based on the unit price of the new configuration. Your deposit will be released back to your account when the CVM instance is terminated.

Eligible pay-as-you-go instances (CPU and memory) will not be charged after shutdown. For more information about limitations, refer to [No Charges When Shut Down for Pay-as-You-Go Instances](#). Ineligible instances will still be charged after shutdown.

## Spot Instance

Spot instances A novel operational mode for CVM services, similar to the pay-as-you-go mode, falls under the post-payment category, where charges are calculated by the second and settlements are made on the hour. Spot instances utilize a market-based floating billing system, where prices fluctuate in response to shifts in supply and demand dynamics. Compared to the pay-as-you-go mode, significant discounts are offered, with the price typically ranging from 3% to 20% of the pay-as-you-go price. However, spot instances may be subject to system-initiated reclamation due to dwindling resource inventories or competitive bidding by other users.

For more information on spot instance policies, use cases, and limitations, see [Spot Instance](#).

## Reserved Instance

The reserved instance (RI) billing mode is a more favorable prepaid billing mode. RI is a bill discount for a pay-as-you-go physical instance but not an actual physical instance, so it is also pay-as-you-go in essence. The pay-as-you-go instances must exactly match RI attributes to benefit from the billing discount during the RI term.

If the attributes of a pay-as-you-go physical instance in use match RI attributes, you can enjoy a bill discount. You can directly purchase and activate RI for existing instances or as new instances.

After prepaying a certain amount for RI, you can enjoy the corresponding discount within the purchase duration.

Compared with the original monthly subscription and pay-as-you-go billing modes, the combination of RI and pay-as-you-go offers you the greatest discount possible to strike a balance between the flexibility and costs.



# Purchasing Channels

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Tencent Cloud allows users to purchase CVM instances either from the console or via API. This document describes these two purchase methods in detail.

## Purchasing an Instance at the International Site

All users can make purchases via [Tencent Cloud CVM purchase page](#). Depending on the billing mode, users can purchase three different types of cloud servers: subscription (billed monthly/annually), pay-as-you-go (billed by second, settled hourly), and spot instances (billed by second, settled hourly). For more details, see [Billing Mode](#). Specific directions for purchasing these three types of servers at the International Site are as follows.

### Monthly Subscription

1. Log in to [Tencent Cloud CVM purchase page](#).
2. When selecting the models under Custom configuration, select the **billing mode** as **Monthly Subscription**.
3. Set the region, availability zone, network, and instance based on actual needs and page prompts.
4. Upon confirming your order, you may proceed with payment via the credit or debit card linked to your account. For more details, please refer to the [Payment Methods](#) section of our Cloud Server documentation.
5. The server is activated immediately after payment, and the IP address will be visible after approximately 1 to 5 minutes. You can then sign in to manage it.

#### Note:

For all configurations, you can refer to the help documentation such as [Billing Overview](#), [Pricing List](#), and [Public Network Billing](#) before purchasing according to actual needs.

For more purchase instructions and notes, see [Notes for Purchasing from Console](#).

Instances in monthly subscription cannot be returned before their duration ends. Verify the required configurations before making the payment.

### Pay-as-you-go

1. Log in to the [Tencent Cloud CVM purchase page](#).
2. Select **Pay-as-you-go** for **Billing mode**.
3. Select the region, availability zone, network type, instance and other configuration information.
4. Upon confirming your order, you may proceed with the payment using the credit or debit card linked to your account. For more details, please refer to the [Payment Methods](#) section of our Cloud Server documentation.
5. The CVM instance is activated immediately after the payment is made. The IP address will be displayed in 1–5 minutes, and you can log in to the CVM instance to manage it.

**Note:**

After activating the pay-as-you-go CVM instance, make sure that your account balance is sufficient. An insufficient balance may cause overdue payments or even instance repossession. For more information, see [Payment Overdue](#). You can purchase CVM instances as needed by referring to [Billing Overview](#), [Pricing List](#), and [Public Network Billing](#). For more purchase instructions and notes, see [Notes for Purchasing from Console](#).

**Spot instance**

1. Log in to the [Tencent Cloud CVM purchase page](#).
2. Select **Spot instance** for **Billing mode**.
3. Select the region, availability zone, network type, instance and other configuration information.
4. Upon confirming your order, you may proceed with payment using the credit or debit card linked to your account. For more details, please refer to the [Payment Methods](#) section of our Cloud Server documentation.
5. The CVM instance is activated immediately after the payment is made. The IP address will be displayed in 1–5 minutes, and you can log in to the CVM instance to manage it.

**Note:**

After activating the CVM spot instance, make sure that your account balance is sufficient. An insufficient balance may cause overdue payments or even instance repossession. You can purchase CVM instances as needed by referring to [Billing Overview](#), [Pricing List](#), and [Public Network Billing](#). For more purchase instructions and notes, see [Notes for Purchasing from Console](#).

## Purchasing Instances via an API

You can purchase a CVM instance through an API as instructed in [RunInstances](#).

# Billing Overview

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The price of a CVM instance consists of hardware (CPUs and memory), disk (system disks and data disks), and network fees. When you purchase a CVM instance, the corresponding resources are available on the purchase page. This document describes the pricing, purchase method, and configuration modification of CVM instance hardware (CPUs and memory).

## Prices for Pay-as-You-Go Instances

### Note:

This section describes the pricing rules for pay-as-you-go CVM instances. Please use [CVM Price Calculator](#) to check out the price details.

Some CVM instance types are billed on a pay-as-you-go basis with 3-tiered pricing. For instance types that support 3-tiered pricing, newly purchased instances, and CVM instances where the original configuration remains unchanged are billed based on 3-tiered pricing. For details about instance types that support and do not support 3-tiered pricing, see the tiered pricing details on the purchase page.

### Notes

The list prices of pay-as-you-go instances is at an hourly rate. They are billed per second on an hourly billing cycle. The CVM tiered pricing policy applies only to the CPU and memory fees.

The price calculator displays the tier-1 price.

For instance types that support 3-tiered pricing: Tier-2 price = Tier-1 price x 50%; Tier-3 price = Tier-1 price x 34%

For instance types that do not support 3-tiered pricing: Tier-1 price = Tier-2 price = Tier-3 price

For details about instance types that support and do not support tiered pricing, see the tiered pricing details on the purchase page or pricing center.

The tiered pricing policy applies only to CVMs with unchanged configurations. If the configuration of a CVM is changed, the CVM is thereafter billed based on the tier-1 price of the new configuration.

For example, the original configuration of a CVM is 2C4G. When the CVM is used for 100 hours, it enters the tier-2 pricing phase. If the configuration is changed to 1C2G at this time, the CVM is billed based on the tier-1 pricing of 1C2G.

The overdue payment policy for pay-as-you-go CVMs remains unchanged. For details, see [Overdue payment policy](#). Discounts are not provided for pay-as-you-go CVMs.

Eligible pay-as-you-go instances (CPU and memory) are not charged after shutdown. For details, see [No Charges When Shut Down for Pay-as-You-Go Instances](#).

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During the No Charges When Shut Down period, pay-as-you-go instances support for the tiered pricing no longer calculate the usage period. After the instance is restarted, its usage period will continue to count. Ineligible instances will still be charged after shutdown.

# Notes for Purchasing from Console

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This section demonstrates how to purchase CVMs on the official website and describes some important considerations.

To purchase CVMs, please see CVM purchase guides:

[Create a Windows CVM](#)

[Create a Linux CVM](#)

# Purchase Limits

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## Purchase Limits

### Pay-as-you-go CVM instances

The following features are not available to pay-as-you-go CVM instances:

Agents paying on your behalf

Monthly postpaid users

The **purchase limit** of pay-as-you-go CVM instances for each user in each AZ is between 30 and 60. See the CVM purchase page for the exact purchase limit. If you need more instances, [apply for an instance purchase quota increase](#).

## Applying for Instance Purchase Quota Increase

If you need more instances than your quota in a region, apply for an increase as instructed in [Increasing Instance Purchase Quota](#), where you need to select the billing mode, target region, target quota, instance configuration, and application reason. We will evaluate your application based on your actual needs and increase your quota accordingly.

### Note:

If you need to apply for an increase in different AZs, submit applications separately, as different AZs come with different quotas.

# Instance Configuration Adjustment Pricing

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Hardware devices of Tencent Cloud instances can be adjusted quickly and flexibly, an important feature that makes cloud-based virtual servers easier to use than physical servers.

When your business workload expands or contracts, and you need to upgrade or downgrade the configuration of the cloud server instance, you can adjust the configuration via the console. After the fees are settled, the cloud server will immediately run according to the new configuration.

For the **prerequisites and notes** of configuration adjustment, see [Changing Instance Configuration](#).

For the **directions** of configuration adjustment, see [Changing Instance Configuration](#).

## Monthly Instance Configuration Upgrade

### Billing rules

The instance upgrade follows a daily differential pricing policy, upgrade cost = monthly upgrade difference × upgrade months × [applicable discount](#).

Monthly price difference for the upgrade: Unit price difference between the new and old configurations.

The upgrade cost is calculated daily:

Number of days for upgrade = resource expiration time - current time

Number of months for upgrade = number of days for upgrade / (365/12)

Applicable discount: The applicable discount is matched based on the number of months for upgrade as effective at the International Site.

Configuration upgrade does not affect the resource expiration time.

You can pay configuration upgrade fees by using your vouchers and complimentary balance (complimentary credits).

### Note:

The promotional upgrade policy is consistent with the upgrade rules of the monthly instance configuration, i.e., upgrade cost = monthly upgrade difference × upgrade months × [applicable discount](#). The applicable discount is the current effective discount.

### Billing examples

#### Note:

The prices below are examples and are not the actual prices at the International Site. For the unit price of instances, see [Pricing | Cloud Virtual Machine](#).

### Background

On December 31, 2022, purchased a 2-core cloud server with 2 GB memory. The unit price for monthly subscription was 16.8 USD/month.

### Example 1

On May 1, 2023, the configuration of a 2-core cloud server with 2 GB memory was elevated to a 4-core one with 8 GB memory. The unit price for this configuration is 44.8 USD/month.

The monthly upgrade price difference =  $44.8 - 16.8 = 28$  USD/month

Days of upgrade =  $31 \times 4 + 30 \times 3 + 30 = 244$  days

Where, 4 stands for the 4 months: July, August, October, and December, and 3 stands for 3 months: June, September, and November; and 30 stands for the 1 day subtracted from the 31 days in May.

Applicable Discount: According to the monthly subscription, you can enjoy an 88% discount if the duration of the subscription is between 6 to 11 months.

**Upgrade Cost** =  $(44.8 - 16.8) \times (244 / (365/12)) \times 0.88 = 197.66$  USD

## Monthly configuration downgrade

### Billing rules

Refund amount for instance downgrade = Refund for the instance - Cost of the new specification

If the refund fees > 0, execute the configuration downgrade, and the fees will be refunded to your Tencent Cloud account through the **original payment method**.

If the refund fee ≤ 0, implement the configuration downgrade, but no refund will be provided.

If you use a discount or voucher for purchase, the discount amount and voucher will not be refunded.

The detailed logic for the instance refund is as follows:

Refund for the instance = Fees of current valid orders + Fees of future orders - Fees of consumed resources

Fees of current valid orders: The fees paid for current valid orders, excluding discounts and vouchers.

Fees of future orders: The amount paid for future orders, excluding vouchers.

Fees of consumed resources are calculated based on the following policies:

Used portion = Fees of consumed host + Fees for consumed network

Fees of consumed host: On the day the user initiates the refund, if the CVM has been used for a full month, the cost of the used months will be deducted according to the prices and discounts that are listed at the International Site for the corresponding monthly subscription; for usage less than a month, the deduction will be calculated according to the duration of the pay-as-you-go billing mode.

For more information on discounts, see [Billing Overview](#).

Used network fees: It is required to be calculated based on the billing type of the network. If the network billing type is pay-as-you-go, then the used network fee is 0; if the network billing type is bandwidth-based, then the used network fees = hourly bandwidth cost of the pay-as-you-go host × usage duration.

The usage is accurate down to the second.



## Billing examples

### Note:

The prices below are examples and are not the actual prices at the International Site. For the unit price of instances, see [Pricing | Cloud Virtual Machine](#).

Instance refund charge case:

Standard Type S5, a 2-core instance with 2 GB memory and a 20 GB local hard disk in Guangzhou Zone 2, excluding bandwidth, 6.02 USD/month, used a 10-USD coupon, purchased for 1 year, and enjoyed a 17% discount for monthly subscription. Discount amount is  $6.02 \times 12 \times 0.83 = 59.96$  (USD) Payment amount is  $59.96 - 10 = 49.96$  (USD).

The customer purchased S5 and used it for 48 hours within 5 days; then renewed it for 1 year with an 83% discount for the monthly subscription, and the actual renewal payment was 59.96 USD. Refund fees in cash =  $49.96$  (fees of current valid orders) +  $59.96$  (Fees of future orders) -  $0.01$  (instance price for pay-as-you-go billing mode)  $\times 48$  (hours) =  $109.44$  (USD).

# No Charges When Shut Down for Pay-as-You Go Instances

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No Charges When Shut Down means you will not be charged for instances (CPU, memory) after you select the **No Charges When Shut Down** option to **shut down** pay-as-you-go instances. Components such as [cloud disks](#) (system disks and data disks) and images will still be billed.

## Usage Limits

**No Charges When Shut Down** only applies to **pay-as-you-go instances** whose **system disk and data disks are both cloud disks**.

This option is **not available** in the following scenarios:

Starting up/shutting down an instance after login.

Instances attached with local disks.

Spot instances.

Instances that are shut down due to overdue payment: the billing for instance and associated resources stops after they are shut down due to overdue payment. Computing resources and public IPs will be released. The billing will resume after payment is made.

During the No Charges When Shut Down period, pay-as-you-go instances support for the tiered pricing (see [Billing Overview](#)) no longer calculate the usage period. After the instance is restarted, its usage period will continue to count.

If a batch shutdown operation involve instances that are eligible for no charges when shut down and others that are not, then:

For eligible instances, **CPU and memory will not be charged** after shutdown;

Ineligible instances will **still be charged** after shutdown.

## Impacts

When the No Charges When Shut Down feature is enabled, it will **affect** instances as follows:

1. After the instance is shut down, its CPU and memory **will be released**, and starting it again **may fail** due to insufficient resources. If the instance fails to be started, try starting it once more later. If the starting still fails, try other instance specifications. For more information, see [Changing Instance Configuration](#).
2. If the instance was assigned a public IP address, this IP will be **automatically released** after shutdown. Therefore, the instance might fail when restarted. After the instance is restarted, a new public IP will be assigned, while the private IP remains the same.

**To retain the public IP, you can convert it to an EIP before shutting down an instance.** After the CVM is shut down, the EIP will be retained and stop incurring charges.

3. When the instance is shut down, most operations **except for instance startup** will not be available, including adjusting configurations, disks, and networks; reinstalling systems; restarting instances; resetting passwords; renewing; renaming, etc. **You need to start the instance to perform those operations.**

4. No Charges When Shut Down **does not apply to** instance shutdown as a result of configuration/disk adjustments, system reinstallation, and other OPS operations.

## Operation Guide

For more information, see [No Charges When Shut Down for Pay-as-You-Go Instances](#).

# Purchasing Cloud Disks

## Cloud Disk Types

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Cloud Block Storage (CBS) provides highly available, highly reliable, low-cost, and customizable network block device that can be used as a standalone and expandable disk for CVMs. CBS stores data at the data block level in a three-copy distributed mechanism to ensure data reliability. CBS is classified into five types: **Premium Cloud Disk**, **Balanced SSD**, **Cloud SSD**, **Enhanced SSD**, and **ulTra SSD**. Each type has unique performance and characteristics, and the price varies, making CBS suitable for different use cases.

## Notes

Currently, Enhanced SSD and ulTra SSD are only available in certain availability zones. They will be supported in more availability zones.

The performance of Enhanced SSD is only guaranteed when it's attached to S5, M5, and SA2 models created after August 1, 2020, and all later generation models.

**Ultra SSD cloud disks can only be purchased with certain instance types (such as S5se, SA3, S6, etc.).**

**Other types of CVM do not support ultra SSD cloud disks.**

ulTra SSD cannot be used as the system disk.

Enhanced SSD and ulTra SSD cannot be upgraded from other disk types.

## Overview

### Premium Cloud Disk

Tencent Cloud Premium Cloud Disk is a hybrid storage type. It adopts the Cache mechanism to provide a high-performance SSD-like storage, and employs a three-copy distributed mechanism to ensure data reliability. Premium Cloud Disk is suitable for small and medium applications with high requirements for data reliability and standard requirements for performance, such as Web/App servers, business logical processing, as well as small and medium sites.

### Balanced SSD

Balanced SSD is an entry-level all-flash block storage product. It's highly cost-effective and suitable for medium applications with high requirements for data reliability and standard requirements for performance, such as Web/App servers, business logical processing, KV services, as well as basic database services.

### Cloud SSD

Cloud SSD is an all-flash cloud disk using NVMe SSD as the storage media, and employs a three-copy distributed

mechanism. It provides storage service with low latency, high random IOPS, high throughput I/O, and data security up to 99.9999999%, making it suitable for applications with high requirements for I/O performance.

### Enhanced SSD

Enhanced SSD is based on Tencent Cloud's latest storage engine, NVMe SSD storage media and the latest network infrastructure. It employs a three-copy distributed mechanism to provide high-performance storage with low latency, high random IOPS, high throughput I/O, and data security up to 99.9999999%, making it suitable for I/O-intensive applications with high requirements for latency, such as large databases and NoSQL. Uniquely, the performance and capacity of Enhanced SSD cloud disks can be independently adjusted to meet your requirements.

### ulTra SSD

ulTra SSD is powered by Tencent Cloud's latest high-performance distributed storage engine, high-speed network infrastructure, and the latest storage hardware. It boasts long-term and stable performance with ultra low latency. It is suitable for I/O-intensive and throughput-intensive workloads that require ultra low latency, such as large databases (MySQL, HBase, Cassandra, etc.), key-value storage models (etcd, rocksdb, etc.), log search service (Elasticsearch, etc.), and real-time high-bandwidth businesses (video processing, live streaming, etc.). It performs well in key transaction workloads, core database services, large-scale OLTP services, video processing, and other scenarios. Uniquely, the performance and capacity of ulTra SSD cloud disks can be independently adjusted to meet your requirements.

## Performance metrics

The table below compares the performances of the five CBS services.

Metric	ulTra SSD	Enhanced SSD	Cloud SSD	Balanced SSD	Premium Cloud Disk
Max size (GB)	32,000	32,000	32,000	32,000	32,000
Max IOPS	Up to 1,000,000 after stacking extra performance	Up to 1,00,000 after stacking extra performance	26,000	10,000	6000
Random IOPS performance	<b>Baseline Performance:</b> Random IOPS = Min {4000 + Capacity (GiB) x 100, 50000}	<b>Baseline Performance:</b> Random IOPS = Min {1800 + Capacity (GiB) x 50, 50000} <b>Extra Performance:</b> Max IOPS = Min {Extra Performance Value x 128,	Random IOPS = Min {1800 + Capacity (GiB) x 30, 26000}	Random IOPS = Min {1800 + Capacity (GiB) x 15, 10000}	Random IOPS = Min {1800 + Capacity (GiB) x 8, 6000}

	<b>Extra Performance:</b> Max IOPS = Min {Extra Performance Value x 128, 950000}	50000} For details, see <a href="#">Enhanced SSD Performance</a>			
Max throughput (MB/s)	Up to 4,000 MB/s with extra performance	Up to 1,000 MB/s with extra performance	260 MB/s	190 MB/s	150 MB/s
Throughput performance (MB/s)	<b>Baseline Performance:</b> Throughput = Min {120 + Capacity (GiB) x 0.5, 350} <b>Extra Performance:</b> Throughput = Min {Extra Performance Value x 1, 3650}	<b>Baseline Performance:</b> Throughput = Min {120 + Capacity (GiB) x 0.5, 350} <b>Extra Performance:</b> Throughput = Min {Extra Performance Value x 1, 650}For details, see <a href="#">Enhanced SSD Performance</a>	Throughput = Min {120 + Capacity (GiB) x 0.2, 260}	Throughput = Min {100 + Capacity (GiB) x 0.2, 190}	Throughput = Min {100 + Capacity (GiB) x 0.15, 150}
Single-path random read/write latency	0.1 - 0.5 ms	0.3 - 1 ms	0.5 - 3 ms	0.5 - 3 ms	0.8 - 5 ms
Note	ulTra SSD cloud disks can only be purchased with Standard Storage Optimized S5se instances as instructed in <a href="#">Instance Types</a> .	The performance of Enhanced SSD is only guaranteed when it's attached to S5, M5, and SA2 models and all later generation models. The max IOPS and max throughput performance of a single Enhanced SSD cloud disk are limited by the type of instance it is attached to. Currently, only when the Enhanced SSD cloud disk is attached to	N/A	N/A	N/A

		the latest generation instances (S6 and SA3), its maximum performance can be achieved. Note that the metric information on the achievable maximum storage performance for different instance types will be continuously updated.		
--	--	--	--	--

**Note:**

The main difference among cloud disks is the I/O performance.

The max IOPS performance is tested out in 4 KiB I/O cases, and the max throughput is tested out at 256 KiB I/O cases. For specific test methods, see [Measuring cloud disk performance](#).

## Application Scenarios

**Enhanced SSD is more suitable for latency-sensitive or I/O-intensive scenarios**, including:

High performance and high data reliability: Suitable for high-load, mission-critical business systems. SSD provides three-copy data redundancy and is equipped with comprehensive capabilities for data backup, snapshots, and data restoration within seconds.

Medium and large databases: Support medium and large relational database applications that contain tables with millions of rows, such as MySQL, Oracle, SQL Server, and MongoDB.

Large NoSQL: Support NoSQL businesses such as HBase and Cassandra.

Elasticsearch: Support low-latency ES storage.

Video service: Suitable for applications with high requirements for storage bandwidth, such as audio/video encoding and decoding, live streaming and recording playback.

Big data analysis: Suitable for data analysis, data mining, business intelligence, and other fields. Provide distributed processing capabilities for data at TB and PB levels.

**ulTra SSD is more suitable for latency-sensitive scenarios that require ultra low latency**, including:

Key-value (KV) storage: Support rocksdb, etcd, etc. The KV storage service generally writes data to disk in the serial I/O mode, which requires ultra low latency. The single thread latency determines the overall system performance.

ulTra SSD guarantees the latency as low as tens of microseconds, making it fit for core business systems with high requirements for data reliability and availability.

Large databases: Support medium and large relational database applications that contain tables with millions of rows, such as MySQL, Oracle, SQL Server, and MongoDB.

Large NoSQL: Support NoSQL businesses such as HBase and Cassandra.

Elasticsearch: Support low-latency ES storage.

Video service: Suitable for applications with high requirements for storage bandwidth, such as audio/video encoding and decoding, live streaming and recording playback.

Core business systems: Suitable for I/O-intensive applications and other core business systems with high requirements for data reliability.

Big data analysis: Suitable for data analysis, data mining, business intelligence, and other fields. Provide distributed processing capabilities for data at TB and PB levels.

High performance and high data reliability: Suitable for high-load, mission-critical business systems. SSD provides three-copy data redundancy and is equipped with comprehensive capabilities for data backup, snapshots, and data restoration within seconds.

**Cloud SSD is applicable for applications with high and medium loads**, including:

Medium databases: Medium and large relational database applications, such as MySQL.

Image processing: Support data analysis and storage businesses, such as image processing.

**Balanced SSD is mainly used in the following data scenarios:**

Medium applications with high requirements for data reliability and standard requirements for performance, such as Web/App servers, business logical processing, KV services, as well as basic database services.

**Premium Cloud Disk is mainly suitable for the following data scenarios:**

Small and medium databases and Web/App servers. Provide long-term and stable I/O performance.

Scenarios that require balanced storage capacity and performance, such as enterprise office services.

Core business testing and the front and back end debugging.

## Billing Description

For pricing details of cloud disks, see [Price Overview](#).



# Pricing List

Last updated : 2024-01-08 09:25:40

For pricing details of cloud disks, see [Price Overview](#).

# Purchasing Reserved Instances

## Overview

Last updated : 2024-01-08 09:25:40

### Overview

The reserved instance (RI) billing mode is a more favorable prepaid billing mode. RI is a bill discount for a pay-as-you-go physical instance but not an actual physical instance, so it is also pay-as-you-go in essence. The pay-as-you-go instances must exactly match RI attributes to benefit from the billing discount during the RI term.

If the attributes of a pay-as-you-go physical instance in use match RI attributes, you can enjoy a bill discount. You can directly purchase and activate RI for existing instances or as new instances.

After prepaying a certain amount for RI, you can enjoy the corresponding discount within the purchase duration.

Compared with the original monthly subscription and pay-as-you-go billing modes, the combination of RI and pay-as-you-go offers you the greatest discount possible to strike a balance between the flexibility and costs.

### Attributes

**Region:** the physical location of an IDC, such as Silicon Valley.

**Availability zone:** a Tencent Cloud IDC with independent power supply and network in the above region, such as Silicon Valley Zone 1.

**Instance type:** a Tencent Cloud CVM instance family type, such as Standard.

**Specification:** RI specifications, such as S4.SMALL1.

Operating system: Linux, Windows.

### Note:

The pay-as-you-go instances must exactly match RI attributes to benefit from the billing discount during the RI term.

### Concept comparison

Item	RI	Pay-as-you-go instance
Concept	A discount for pay-as-you-go instances.	An instance purchased using the <a href="#">pay-as-you-go</a> billing option, i.e., a running virtual machine.
Usage	RIs cannot be used separately; instead, they can only be used with matched pay-as-you-go instances to offset part of the pay-as-you-go bill.	CVMs can be managed and configured independently as a simple web server or as part of a powerful cloud solution together with other Tencent Cloud products.

### Notes

You can view RI prices in [Pricing | Cloud Virtual Machine](#). Refer to your bills for final prices.

You can make purchases in the [console](#) or through [API](#).

Operating system: Currently, RI supports Windows and Linux CVM instances.

Payment method: There are two payment options, namely **All Upfront**, **Partial Upfront**.

Quota: Each user can have up to 20 RIs in one availability zone.

Configurations of an RI cannot be changed after purchase. The RI billing discount will no longer apply to the matched instance if you change its configurations.

The RI billing discount will still apply to matched CVM instances even after they are proactively or forcibly shut down. Currently, RIs are non-refundable.

## Billing Mode

All Upfront: you pay for the entire RI term with one upfront payment. This option provides you with the largest discount compared to the other two options below.

Partial Upfront: you make a low upfront payment and then pay for instance fees at a monthly rate or discounted hourly rate during the RI term.

Please note that you pay for the entire RI term regardless of actual usage.

## Validity period type

1 year (365 days).

Assume you purchased a 1-year term CVM RI on May 25, 2019 11:15:24, the RI will be valid from May 25, 2019 11:00:00 to May 25, 2020 11:59:59.

Note: the matched pay-as-you-go instances continue to run when the RI expires, but the billing discount stops.

To check availability zones that support RIs, please use the [DescribeReservedInstancesOfferings](#) API.

Operating system: Currently, RI supports Windows and Linux CVM instances.

Payment method: there are two payment options, namely **All Upfront**, **Partial Upfront**.

Validity period: 1 year (365 days).

Quota: each user can have up to 20 RIs in one availability zone.

## Billing rules

RIs are billed for every clock-hour (3,600 seconds) during the term that you select. For example, 10:00:00 to 10:59:59 is one clock-hour. The RI billing benefit can be applied to multiple eligible instances at the same time up to a maximum of 3600 seconds in a clock-hour. The breakdown will be detailed in your bill.

RIs are billed on every hour during the term that you select, regardless of whether it is matched to a pay-as-you-go instance. Therefore, it is important to choose a suitable payment option based on your budget and resources. RIs take effect on the previous hour of the creation time and expire on the next hour of the expiration time. For example, if you purchase a 1-year term CVM RI on May 25, 2019 11:15:24, the RI billing starts from May 25, 2019 11:00:00, and ends on May 25, 2020 11:59:59. If you already have matched CVM resources at the time of purchase, the first RI billing cycle will be 11:00:00-11:59:59, May 25, 2019, and it will be billed for every clock-hour.

# Matching Rules

Last updated : 2024-01-08 09:25:40

## Matching Rules

The purchased reserved instance (RI) automatically matches to pay-as-you-go instances during the RI term. For now, Windows znd Linux instances are supported. If you have no instances that match the RI specifications, the RI will become idle but still incur fees. When you purchase an instance with matched specifications, the RI will immediately matches to it and the benefit applies.

RI's are automatically matched with pay-as-you-go instances without manual intervention.

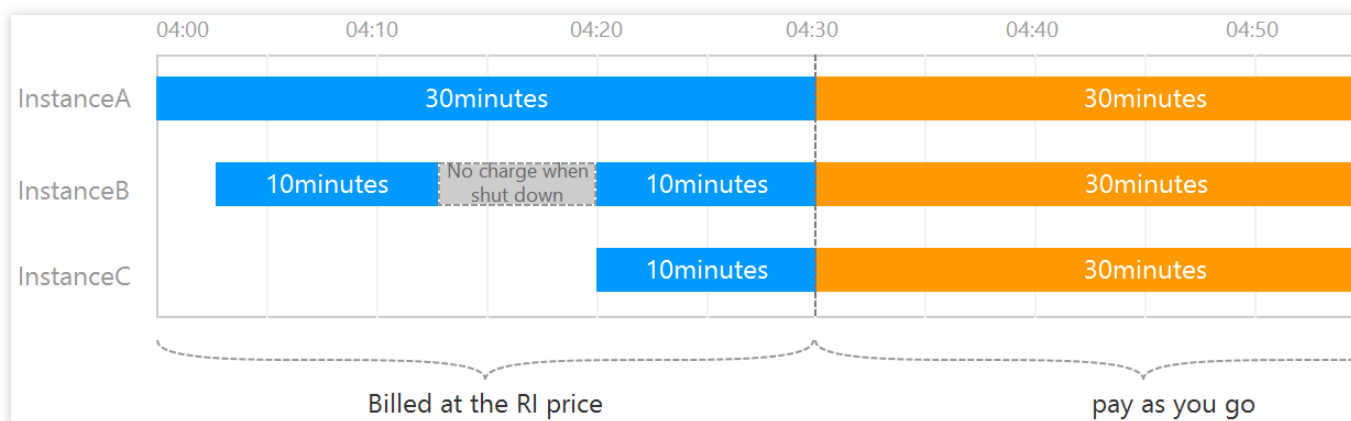
The RI billing benefit can apply to a maximum of 3,600 seconds (one hour) of instance usage per clock-hour. You can run multiple instances concurrently, but can only receive the benefit of the RI discount for a total of 3,600 seconds per clock-hour; instance usage that exceeds 3,600 seconds in a clock-hour is billed at the pay-as-you-go rate.

For example, if you purchase one S3.16xlarge256 RI in Silicon Valley Zone 1, and run three pay-as-you-go S3.16xlarge256 instances of the same attributes concurrently in the same availability zone for one hour, one instance is charged at one hour of RI usage and the other two instances are charged at one hour of pay-as-you-go usage each. However, if you purchase one S3.16xlarge256 RI in Silicon Valley Zone 1 and run three pay-as-you-go instances (A, B, and C) of the same attributes in the same availability zone for 20 minutes each within the same hour, the total running time for the instances is one hour, which results in one hour of RI usage and 0 hours of pay-as-you-go usage, as shown below.

Pay-as-you-go instance	4:00-4:20	4:20-4:40	4:40-5:00
A			
B			
C			

Billed at the RI price

If the three eligible instances are running concurrently, the RI billing benefit is applied to all the instances at the same time for up to a maximum of 3,600 seconds in a clock-hour; thereafter, the pay-as-you-go price applies.



### Effective time

RI is billed on every hour. They take effect on the previous hour of the creation time and expire on the next hour of the expiration time.

Example 1: assume you purchased a 1-year term CVM RI on May 25, 2019 11:15:24, the RI will be valid from May 25, 2019 11:00:00 to May 25, 2020 11:59:59.

Example 2: assume you purchased a 1-year term CVM RI on May 25, 2019 11:00:00, the RI will be valid from May 25, 2019 11:00:00 to May 25, 2020 11:59:59.

# Reserved Instance User Guide

Last updated : 2024-01-08 09:25:40

## Overview

This document describes how to use RIs.

## Prerequisites

You have already logged in to CVM console and are in the [Reserved Instance](#) page.

## Directions

### 1. Creating RIs

For more information, see [Creating Reserved Instance](#).

### 2. Viewing RIs

The screenshot shows the 'Reserved Instance' page in the Tencent Cloud CVM console. The left sidebar contains navigation options like 'Instances', 'Dedicated Hosts', 'Reserved Instance', 'Placement Group', 'Images', 'Auto Scaling', 'Cloud Block Storage', 'Snapshots', 'SSH Key', 'Security Groups', 'EIP', 'Service Migration', and 'Recycle Bin'. The main content area has a 'Reserved Instance' header with a region dropdown menu set to 'Hong Kong, China'. Below this is a 'Create Reserved Instance' button and a search bar. A table lists five reserved instances, all with a status of 'Created' and located in 'Hong Kong Zone 2'. The table columns are: Reserved Instance ID/Name, Status, Availability Zone, Instance Type, Operating System, Specifications, Number of Pods, Payment Type, and Effective Date. The instances are: ri-9dn1plzc Unnamed, ri-pezrtppc wgc, ri-alpw9zm2 wgc, ri-5rwoyq2o Unnamed, and ri-kguknbl2 RI-2. The bottom of the table shows 'Total items: 5' and '20 / page'.

Reserved Instance ID/Name	Status	Availability Zone	Instance Type	Operating System	Specifications	Number of Pods	Payment Type	Effective Date
ri-9dn1plzc Unnamed	Created	Hong Kong Zone 2	Standard S2	linux	S2.MEDIUM2	1	All Upfront	2020-09-10 20:00:00
ri-pezrtppc wgc	Created	Hong Kong Zone 2	Standard S2	linux	S2.MEDIUM2	1	All Upfront	2020-09-10 20:00:00
ri-alpw9zm2 wgc	Created	Hong Kong Zone 2	Standard S2	linux	S2.MEDIUM2	1	All Upfront	2020-09-10 20:00:00
ri-5rwoyq2o Unnamed	Created	Hong Kong Zone 2	Standard S2	linux	S2.MEDIUM2	2	All Upfront	2020-09-08 19:00:00
ri-kguknbl2 RI-2	Created	Hong Kong Zone 2	Standard S2	linux	S2.MEDIUM2	1	Partial Upfront	2020-09-08 16:00:00

Choose the region where the RI you want to view resides.

On this page, you will see the following information: Reserved Instance ID/Name, Status, Region, Availability Zone,

Instance Type, Specifications, Operating System, Number of RIs, Payment Type, Effective Date, and Expiry Date. You can also refer to [Reserved Instance Billing Mode](#) and [Overview](#) for RI attributes. You can click



in the upper right corner to select the displayed fields in the pop-up **Display Settings** window, as shown below:

Display Settings

Select the columns you want to display. With your screen resolution, up to 11 columns can be selected (10 selected now).

<input type="checkbox"/> Reserved Instance ID/Name	<input checked="" type="checkbox"/> Specifications
<input checked="" type="checkbox"/> Status	<input checked="" type="checkbox"/> Number of Pods
<input type="checkbox"/> Region	<input checked="" type="checkbox"/> Payment Type
<input checked="" type="checkbox"/> Availability Zone	<input checked="" type="checkbox"/> Effective Date
<input checked="" type="checkbox"/> Instance Type	<input checked="" type="checkbox"/> Expiry Date
<input type="checkbox"/> Operating System	<input type="checkbox"/> Operation

OK

### 3. Searching RIs

You can search for RIs by instance ID, RI name, status, instance type, specification, and payment type. To search for an RI, enter keywords in the search box and click



. Alternatively, you can first select a filter (such as instance ID), enter keywords, and click



, as shown below.

Create Reserved Instance

Separate keywords with "|". and separate tags with carriage return

Select a filter

Instance Name

Instance ID

Instance Status

Instance Specification

Payment Type

Instance Type

Reserved Instance ID/Name	Status	Availability Zone	Instance Type	Specifications	Number of Pods	Payment Type	Effective Date	Expiry Date
ri-████████ match	Created	Frankfurt Zone 1	Standard S3	S3.LARGE16	1	No Upfront	2020-09-08 20:00:00	2021-09-08 20:59:59
ri-████████ RI-1	Created	Frankfurt Zone 1	Standard S3	S3.SMALL4	1	No Upfront	2020-09-08 11:00:00	2021-09-08 11:59:59

Total items: 2

20 / page

4. Checking RI discounts

Click **View Bill** to see the discount details of the selected RI.

Reserved Instance ID/Name	Status	Availability Zone	Instance Type	Operating System	Specifications	Number of Pods	Payment Type	Effective Date	Expiry Date
ri-████████ match	Created	Frankfurt Zone 1	Standard S3	linux	S3.LARGE16	1	No Upfront	2020-09-08 20:00:00	2021-09-08 20:59:59
ri-████████ RI-1	Created	Frankfurt Zone 1	Standard S3	linux	S3.SMALL4	1	No Upfront	2020-09-08 11:00:00	2021-09-08 11:59:59

Total items: 2

20 / page

5. Creating CVM instances from RI

For more information, see [Creating CVM Instances from Reserved Instance](#).



# Creating Reserved Instance

Last updated : 2024-01-08 09:25:40

## Overview

Reserved Instance (RI) provides a discount for pay-as-you-go instances. This document describes how to create RI via the console.

## Directions

1. Log in to the [CVM Console](#).
2. Click **Reserved Instance** on the left sidebar to enter the management page.
3. Click **Create Reserve Instance** to purchase RIs.

The screenshot shows the Tencent Cloud CVM Reserved Instance management console. On the left sidebar, the 'Reserved Instance' option is selected and highlighted with a red box. The main content area is titled 'Reserved Instance' and includes a region selector set to 'Frankfurt'. A 'Create Reserved Instance' button is prominently displayed at the top of the main area, also highlighted with a red box. Below this button is a table listing existing reserved instances. The table has columns for 'Reserved Instance ID/Name', 'Status', 'Availability Zone', 'Instance Type', 'Operating System', 'Specifications', 'Number of Pods', and 'Pods'. Two instances are listed: one with ID 'ri-...' and name 'match', and another with ID 'ri-...' and name 'RI-1'. Both are in 'Created' status, located in 'Frankfurt Zone 1', using 'Standard S3' instance type, 'linux' operating system, and 'S3.LARGE16' and 'S3.SMALL4' specifications respectively. A 'Total items: 2' summary is shown at the bottom of the table.

Reserved Instance ID/Name	Status	Availability Zone	Instance Type	Operating System	Specifications	Number of Pods	Pods
ri-... match	Created	Frankfurt Zone 1	Standard S3	linux	S3.LARGE16	1	N
ri-... RI-1	Created	Frankfurt Zone 1	Standard S3	linux	S3.SMALL4	1	N

Total items: 2

4. Configure the following information as prompted by the page:

Parameter	Required/Optional	Description
Region/Availability Zone	Required	The region and availability zone where the matched pay-as-you-go instances reside.
Operating System	Required	Linux OS, Windows.

Validity	Required	RI term: 1 year.
Instance	Required	The type of pay-as-you-go instances that you want to match the RI. These pay-as-you-go instances must exactly match RI attributes to benefit from the billing discount during the RI term.
RI Name	Optional	User-defined. The RI name defaults to "unnamed" if this parameter is left empty. You can enter any name within 60 characters.
Billing Mode	Required	Select a billing option as needed: <b>All Upfront:</b> you pay for the entire RI term with one upfront payment. This option provides you with the largest discount compared to the other two options below. <b>Partial Upfront:</b> you make a low upfront payment and then pay for instance fees at a monthly rate or discounted hourly rate during the RI term.
Quantity	Required	Number of RIs you want to purchase

5. Click **Purchase Now** and complete the payment. Then you can visit the [Reserved Instance](#) console to query, search and manage your RIs. On this page, you can click **Create Instance** to create CVM instances, or click **View Bill** to see RI discount details.

**Cloud Virtual Machine**

- Instances
- Dedicated Hosts
- Reserved Instance**
- Placement Group
- Images
- Auto Scaling
- Cloud Block Storage
- Snapshots
- SSH Key
- Security Groups
- EIP
- Service Migration
- Recycle Bin

**Reserved Instance**

Frankfurt
 Other regions

Create Reserved Instance

Separate keywords with "|", and separate tags with carriage return

Reserved Instance ID/Name	Status	Availability Zone	Instance Type	Operating System	Specifications	Number of Pods	Price
ri- match	Created	Frankfurt Zone 1	Standard S3	linux	S3.LARGE16	1	N
ri- RI-1	Created	Frankfurt Zone 1	Standard S3	linux	S3.SMALL4	1	N

Total items: 2

# Purchasing Public Network Bandwidth

## Public Network Billing

Last updated : 2024-01-08 09:25:40

### Network Billing Overview

Tencent Cloud provides multi-line BGP ISP access, ensuring high-quality network lines.

Currently, the network offers the following two billing methods:

**Billing by bandwidth:** Billed based on the public network transmission rate (in Mbps). If your bandwidth utilization rate is above 10%, we recommend choosing billing by bandwidth first.

**Billing by traffic:** Billed based on the total data volume of public network transmission (in GB). If your bandwidth utilization rate is below 10%, we recommend choosing billing by traffic first.

### Network Billing Mode

#### Note:

To prevent high costs due to sudden traffic spikes, you can limit this by specifying a bandwidth cap. If this cap is exceeded, packets will be discarded by default and not billed. For details, refer to [Public Network Bandwidth Cap](#).

CVM Billing Mode	Network Billing Mode	Network Billing Rules
Monthly subscription	Monthly bandwidth	Monthly prepaid, bandwidth cost needs to be prepaid during host purchase.
	Bill-by-traffic	Bill per hour for public network outbound traffic
Pay-as-you-go	Bill-by-traffic	Bill per hour for public network outbound traffic

### Documentation

[Public Network Billing](#)

# Public Network Fee

Last updated : 2024-01-08 09:25:40

This document describes the public network prices under different billing modes and helps you choose the billing plan that best suits your business.

## Note:

The network fees mentioned in the document are only applied to general BGP IPs. For the prices of premium BGP IPs and accelerated IPs, see [Bandwidth Package](#).

## Monthly Subscription

Purchase fixed bandwidth in advance according to the demand. The payment mode is prepaid. It is suitable for scenarios where business traffic peak is relatively stable over different periods of time and is used long-term.

### Regular BGP IP Billing Price

Region	Price (in USD/Mbps/Month)	
	≤ 5 Mbps	> 5 Mbps
Guangzhou , Shanghai , Nanjing , Beijing , Hong Kong (China) , and Singapore	3.4	11.83
Chengdu and Chongqing		
Seoul and Frankfurt		
Jakarta and Tokyo		
Toronto, Silicon Valley, Virginia, Bangkok, Mumbai, and São Paulo		

### Billing Example

Assuming a user purchased a standard BGP IP in the Guangzhou region, and chose the monthly bandwidth billing mode. The user purchased a fixed bandwidth of 15Mbps for 2 months, resulting in a total cost:  $(3.4 \text{ USD/Mbps/month} \times 5\text{Mbps} + 11.83 \text{ USD/Mbps/month} \times 10\text{Mbps}) \times 2 \text{ months} = 270.6 \text{ USD}$ .

## Bill-by-Traffic

Fees are pay-as-you-go on an hourly billing cycle based on the public network traffic used. Bill-by-traffic is suitable for scenarios where the business traffic peak fluctuates greatly over different periods of time.

### Pricing

Region	Price (USD/GB)
Chinese mainland, Hong Kong (China), Jakarta, and Seoul	0.12
Tokyo	0.13
Singapore	0.081
São Paulo	0.15
Frankfurt, Silicon Valley, and Toronto	0.077
Mumbai and Bangkok	0.1
Virginia	0.075

### Billing Example

Suppose you purchase an EIP in the Guangzhou region in bill-by-traffic mode and use a total of 10 GB traffic between 07:00:00-07:59:59, then at 8:00:00, the payable fees will be  $0.12 \text{ USD/GB} * 10 \text{ GB} = 1.2 \text{ USD}$ .

#### Note:

The traffic units are 1024-based, which means 1 TB = 1,024 GB, and 1 GB = 1,024 MB.

Public network traffic refers to the downstream (that is, outbound) traffic in bytes. During actual data transfer, the traffic generated over the network is around 5-15% more than the application-layer traffic, so the traffic calculated on the Tencent Cloud side may be about 10% more than that calculated on the customer side.

TCP/IP headers: If TCP/IP is used, a packet has a header of 40 bytes. The traffic consumed for the headers is not counted on the application layer. The overhead of this part is around 3% of the traffic.

TCP retransmission: During normal data transfer over the network, around 3-10% of packets are lost and retransmitted. The traffic consumed for the re-transmission is not counted on the application layer. It accounts for 3-7% of the total traffic.

## Bandwidth Package

Tencent Cloud Bandwidth Package (BWP) is a multi-IP aggregated billing method. This mode greatly saves your public network fees when your public network instances have traffic peaks at different times.

Different IP line types correspond to different BWP types and fees as shown below:

IP Line Type	BWP Type
--------------	----------

General BGP IP	<a href="#">BGP bandwidth package</a>
Premium BGP IP	<a href="#">Premium BGP bandwidth package</a>
Accelerated IP	<a href="#">AIA BGP bandwidth package</a>

## References

[Public Network Bandwidth Cap](#)

# Public Network Bandwidth Cap

Last updated : 2024-08-07 14:59:59

This document describes the outbound and inbound bandwidth caps of CVM instances, and compares the peak bandwidth in different billing modes.

## Outbound Bandwidth Cap (Downstream Bandwidth)

The public network bandwidth cap refers to the upper limit of outbound bandwidth, that is, the bandwidth going out from CVM instances. The public bandwidth cap varies by network billing mode.

The following rules apply to instances created after 00:00, February 24, 2020 (UTC +8):

Network Billing Mode	Instance		Bandwidth Cap Range (in Mbps)
	Instance Billing Mode	Instance Configuration	
Billing by traffic	Pay-as-you-go instance	ALL	Mainland China region, Hong Kong (China), Singapore: 0 - 100, and other regions: 0 - 200
	Monthly subscription instance	ALL	0 - 200
Monthly subscription	Monthly subscription instance	ALL	0 - 200
BWP	ALL		0 - 2000

Machines created before 00:00 on February 24, 2020 will follow these rules:

Network Billing Mode	Instance		Bandwidth Cap Range (in Mbps)
	Instance Billing Mode	Instance Configuration	
Billing by traffic	Pay-as-you-go instance	ALL	0 - 100
BWP	ALL		0 - 1000

## Inbound Bandwidth Cap (Upstream Bandwidth)

The public network inbound bandwidth refers to the bandwidth that flows into CVM instances.

Bill-by-traffic public IP:

If the bandwidth you purchased is less than or equals to 10 Mbps, Tencent Cloud will assign 10 Mbps public network inbound bandwidth.

If the bandwidth you purchased is greater than 10 Mbps, Tencent Cloud will assign a public network inbound bandwidth equals to the purchased bandwidth.

Bill-by-BWP public IP:

Tencent Cloud will assign a public network inbound bandwidth equals to the purchased bandwidth.

## Peak Bandwidth

The peak bandwidth is applicable to both bill-by-traffic and bill-by-bandwidth, but it means differently in these two cases as follows:

Billing Mode	Difference	Description
Bill-by-traffic	The peak bandwidth is only regarded as the maximum peak bandwidth, and not as the committed bandwidth. When bandwidth resources are contested, the peak bandwidth may be limited.	The sum of peak bandwidth of all the running bill-by-traffic instances (such as CVMs, EIPs, and elastic IPv6 addresses) cannot exceed 5 Gbps in one region. If your application requires a guaranteed or higher bandwidth, choose bill-by-bandwidth.
Bill-by-bandwidth (monthly bandwidth subscription)	This peak bandwidth is the committed bandwidth, and is guaranteed in case of bandwidth competition.	The sum of peak bandwidth of all the running instances such as CVMs and EIPs that are billed at a fixed bandwidth (monthly bandwidth subscription) cannot exceed 50 Gbps in one region. If you require a higher bandwidth, contact your sales rep.

## See Also

[Adjusting Network Configuration](#)



# Adjusting Public Network Billing

Last updated : 2024-01-08 09:25:40

If the current network billing mode does not meet your business needs, you can choose to adjust the bandwidth or billing mode. For specific operations, refer to [Adjusting Network Configuration](#). This document describes the limitations for adjusting the bandwidth and billing mode, as well as the cost after adjustment.

## Adjusting Bandwidth

CVM Billing Mode	Network Billing Mode	Bandwidth Adjustment
Pay-as-you-go	Bill-by-traffic	Bandwidth can be upgraded or downgraded and takes effects immediately. Costs are settled by traffic, and bandwidth adjustment does not affect cost settlement.
Monthly subscription	Bill-by-traffic	Bandwidth can be upgraded or downgraded and takes effect immediately. Costs are settled by traffic, and bandwidth adjustment does not affect cost settlement.
Monthly subscription	Monthly bandwidth	Not supported.

## Changing Billing Mode

CVM Billing Mode	Network Billing Mode	Network Billing Mode Adjustment
Pay-as-you-go	Bill-by-traffic	Network billing mode cannot be changed.
Monthly subscription	Bill-by-traffic	It can be switched to pay-as-you-go bandwidth subscription. Each instance can be switched once only.
	Monthly bandwidth	It can be switched to pay-by-traffic mode. Each instance can be switched once only. The used bandwidth is billed at the hourly bandwidth unit price.

## Billing Example

Bandwidth unit price is based on the [Public Network Billing Mode](#) price.

**Note:**

Only network fees are calculated. Fees for CVM and other devices need to be settled separately.

### Adjusting Bandwidth

#### Upgrading and Downgrading Bill-by-Traffic Bandwidth Value

The bill-by-traffic host bandwidth cap can be upgraded or downgraded at any time. Bandwidth cap adjustment does not affect public network costs, which are billed based on the actual traffic used.

#### Adjusting the Public Network Billing Mode

##### Switching from "Monthly Bandwidth Billing" to "Billing by Traffic" for Monthly Subscription Instances

CVM instances are billed in the monthly subscription mode. CVM networks billed in the monthly bandwidth subscription mode can be switched to billing by traffic. Each CVM can only be switched once only. After switchover, the refund amount = Purchased Monthly Bandwidth Cost - Resource Usage Cost.

Resource Usage Cost: If the CVM has been used for a full month, the deduction is based on the monthly bandwidth billing rate. In the case of less than a full month, the deduction is based on the hourly bandwidth billing rate for the duration used, calculated to the second.

Cash coupons used for purchasing are not refundable. Non-coupon fees are refunded to the payer's Tencent Cloud account according to the payment method (cash/bonus) and payment ratio.

For example, on June 1, 2020, at 00:00, you purchased a 2 Mbps monthly bandwidth package for a CVM in the Guangzhou region, costing \$6.8 per month, for 3 months. On July 2, 2020, at 12:00 (having used it for 1 month and 36 hours), you switched the 2 Mbps monthly bandwidth package to billing by traffic.

Purchased monthly bandwidth cost =  $\$6.8 \times 3 = \$20.4$ .

Resource Usage Cost =  $\$6.8 + \$0.0058 \times 2 \times 36 = \$7.2176$ .

Refund for network switchover =  $\$20.4 - \$7.2176 = \$13.1824$ .

**Note:**

For the resource usage cost, if resources are used for a full month, it is calculated at the monthly price. In the case of less than a month, it is calculated based on the prorated hourly bandwidth price:

≤ 5Mbps: \$0.0058 USD/Mbps/Hour.

> 5Mbps: \$0.0208 USD/Mbps/Hour.

For the resource usage cost, \$6.8 is the monthly bandwidth fee for a full month. \$0.0058 USD/Mbps/Hour × 2 Mbps × 36 hours is the hourly bandwidth cost for less than a full month.

##### Switching from "Monthly Bandwidth Billing" to "Billing by Traffic" for Monthly Subscription Instances

CVM instances billed annually or monthly can switch their network billing mode from billing by traffic to monthly bandwidth billing. Traffic costs will be billed hourly at the time of conversion; afterwards, the bandwidth cost will be

calculated based on the monthly bandwidth billing mode. Each CVM can only be converted once.

**Note:**

Annual and monthly subscription instances can switch from billing by traffic to monthly bandwidth billing. The default duration for public networks is the remaining duration of the instance, rounded to days and billed proportionally by days (i.e., remaining days / 30 days).

For example, on June 1, 2020, you purchased a 3-month annual and monthly subscription CVM in the Guangzhou region, along with 2Mbps traffic-billed public bandwidth. On July 2, 2020 (with 61 days remaining), you convert the 2Mbps traffic-billed bandwidth to monthly bandwidth, which costs \$6.8 per month.

Remaining days proportion =  $(30 + 31) / 30 = 2.033$ .

Conversion fee =  $6.8 \times 2.033 = \$13.8244$ .

# Image Billing Description

Last updated : 2024-03-28 19:12:35

This document describes the billing policies of CVM images.

## Billing overview

The table below shows the billing details of different types of images.

Image type	Description
Public image	Include open-source images and commercial images: Open-source images do not incur license fees. Using commercial images incurs license fees. Please check the license fee in your bill. Tencent Cloud now provides two series of commercial images, Windows Server images and Red Hat Enterprise Linux images.
Custom image	Billable items: Snapshot fee: The image uses the CBS snapshot service. As a result, retaining custom images incurs a snapshot fee. For regions in China, CBS Snapshot offers a <a href="#">free tier</a> of 80 GB and usage beyond the free tier will be billed over pay-as-you-go. For more details, see <a href="#">Billing Overview</a> . Image fee: If the custom image is sourced from a paid image, using it incurs fees.
Shared image	A shared image is a custom image shared from another Tencent Cloud account. If the shared image is sourced from a paid image, using it incurs fees.

## Windows server images

**In overseas regions (outside of Chinese mainland):** For Windows Server images deployed in overseas regions, the License fee is already included in the billing items of the instance. This means that this fee will be calculated and charged together with the instance fee from the moment you create the instance until it is terminated throughout its entire lifecycle. To get a clearer understanding of your specific charges, you can review the cost details of the relevant instance at any time.

You may refer to the example below to learn how to view the specific charges.

### Note :

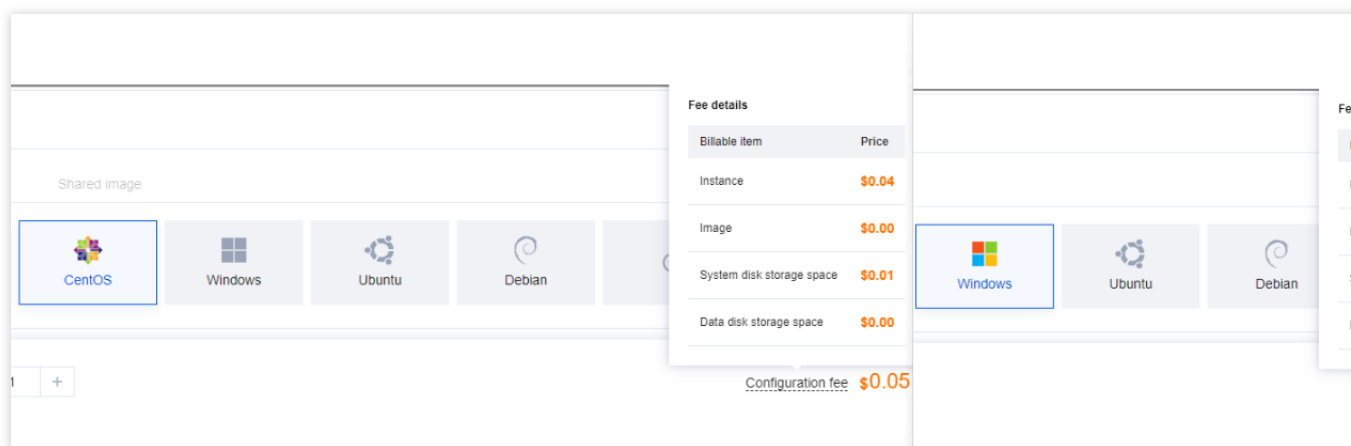
The prices in the example are for reference only. Refer to the purchase page for the actual prices.

### Billing example

A user wants to purchase Standard S5.MEDIUM2 instances in Singapore Zone 1 over pay-as-you-go. The instance configurations are the same except the image.

CentOS instance: 0.04 USD/hour.

Windows instance: 0.05 USD/hour. The license fee is included in the instance fee. The image does not incur additional fees.



## Red Hat Enterprise Linux images

Red Hat Enterprise Linux is a commercial OS. Tencent Cloud is licensed to provide related images. The image fee of Red Hat Enterprise Linux images includes the license fee, and is the same for all Tencent Cloud regions.

### Note:

The Red Hat Enterprise Linux images provided by Tencent Cloud are licensed through official authorization from Red Hat. When you purchase a license on Tencent Cloud, no other forms of discounts (including discounts for spot instances) are supported, nor can vouchers be used for deduction. Once a license has been purchased and activated, it is not eligible for a refund.

To use Red Hat Enterprise Linux images, select an instance type that is verified by Red Hat Enterprise Linux when you purchase the CVM. For more details, see [FAQs about Red Hat Enterprise Linux Image](#).

### Licensed Red Hat Enterprise Linux image pricing

Instance Specifications	Monthly Subscription	Pay-As-You-Go on an Hourly Basis (Minimum Billable Unit: 1 Hour)
4 vCPUs or fewer	Monthly: 43 USD/unit/month Annual: 501 USD/unit/year	0.06 USD/unit/hour
More than 4	Monthly: 95	0.13 USD/unit/hour

vCPUs	USD/unit/month Annual: 1,099 USD/unit/year	
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**Note:**

If you choose a licensed Red Hat Enterprise Linux image when creating a **spot instance**, the image is billed on a pay-as-you-go basis and it cannot enjoy the discounts available for the **spot instance**.

**OS reinstallation and image billing**

Switching between Red Hat Enterprise Linux and other operating systems is supported, and fees are calculated based on the target image reinstalled. If you have previously purchased Red Hat Enterprise Linux image licenses on Tencent Cloud, switching between different versions of Red Hat Enterprise Linux images will not incur additional fees. If you switch from Red Hat Enterprise Linux to another operating system, the fees paid are non-refundable. However, your purchased usage duration is retained. When switching back to Red Hat Enterprise Linux, you will not be charged again for the already purchased duration. **Note** : If you **adjust configurations** or **change the billing mode** while running a different operating system, your purchased Red Hat Enterprise Linux image licenses will be invalidated, requiring a repurchase.

**Example :**

Instance A was purchased on January 1, 2023, with a duration of one month until February 1, 2023. Red Hat Enterprise Linux images were used and licenses were purchased on Tencent Cloud. The operating system was switched to CentOS after 5 days of purchase, and the already paid image fees are non-refundable. Red Hat Enterprise Linux was reinstalled on January 15, 2023, and no additional image fees were needed from January 15, 2023 to February 1, 2023.

Description of image billing with different billing modes for system reinstallation:

Pay-As-You-Go

Monthly Subscription

For instances billed over pay-as-you-go, reinstalling the system with Tencent Cloud authorized Red Hat Enterprise Linux incurs charges at the pay-as-you-go rate. If Tencent Cloud authorized Red Hat Enterprise Linux images have been used within a billing cycle, image license fees will be incurred for that cycle.

**Example :**

At 8:00 AM on January 1, 2023, a CentOS instance was purchased. No image license fees were incurred from 8:00 AM to 9:00 AM. At 9:30 AM, the system was reinstalled with a commercial Red Hat Enterprise Linux image. From 9:00 AM to 10:00 AM, image license fees must be paid. At 10:30 AM, the CentOS was reinstalled for the instance, and image license fees were required from 10:00 AM to 11:00 AM. After 11:00 AM, no image license fees are needed. For instances with a monthly subscription billing mode, if you have not purchased Red Hat Enterprise Linux image licenses on Tencent Cloud before reinstalling the system, reinstalling with Tencent Cloud authorized Red Hat Enterprise Linux will incur image license fees as follows: Image license fees = Pay-as-you-go rate × Remaining instance duration. The remaining duration is calculated in whole days, with any part of a day counted as a full day.

Please carefully check whether the fees meet your expectations when choosing a commercial image.

**Example :**

At 8:00 AM on January 1, 2023, a standard instance S5.MEDIUM2 (vCPU = 2) was purchased, using the free CentOS operating system, and with a duration of one year until 8:00 AM on January 1, 2024. Two hours later, at 10:00 AM on January 1, 2023, the system was reinstalled with a commercial Red Hat Enterprise Linux image, resulting in image license fees as follows: Image license fees = 0.06 USD/hour × 24 hours/day × 365 days.

**Note:**

For instances with a monthly subscription billing mode, the image license fees incurred during system reinstallation are calculated by multiplying the pay-as-you-go rate by the **converted** time . The actual cost will be higher than that of the monthly subscription billing mode. Please carefully check whether the fees meet your expectations when choosing commercial images for reinstallation. If your instance has more than one month left in its duration, please consider purchasing a new instance with the Red Hat Enterprise Linux image.

## Adjusting configurations

Instances using Tencent Cloud authorized Red Hat Enterprise Linux commercial operating systems do not support configuration adjustments or billing mode changes.

## Instance refund description

For instances with a **pay-as-you-go** billing mode, those using Tencent Cloud authorized Red Hat Enterprise Linux images can be terminated or returned.

For instances with a **monthly subscription** billing mode, those using Tencent Cloud authorized Red Hat Enterprise Linux images are not eligible for termination or refund. If you wish to receive a refund of the instance fee, you can reinstall the system with another open-source Linux operating system, such as CentOS, and then proceed with the regular refund process for the instance.

**Note:**

After the system is reinstalled, the fee of the image will not be refunded.

## Images for RI

For Linux RIs, the instance fee does not include the license fee for the Red Hat Enterprise Linux image. The license fee is billed separately.

For PAYG instances using licensed Red Hat Enterprise Linux images, RI discounts can apply to the instance fee, but not the image license fee. The license fee is billed separately.

# Elastic IP Billing

Last updated : 2024-01-08 09:25:40

EIP fees are charged differently according to two types of accounts, bill-by-IP and bill-by-CVM. This document introduces how the EIP fees are billed for the two types of accounts.

## Background

Currently, there are two types of Tencent Cloud accounts: bill-by-IP and bill-by-CVM. All Tencent Cloud accounts registered after June 17, 2020 are bill-by-IP accounts. The differences between the two types of accounts are as follows:

**Bill-by-CVM:** manage bandwidth/traffic on CVMs. The IPs and CLBs of bill-by-CVM accounts do not have network bandwidth or traffic attributes, so they need to be purchased and managed on CVMs.

**Bill-by-IP:** manage bandwidth/traffic on IPs and CLBs. The CVMs purchased by these accounts no longer retain external network bandwidth or traffic resources, the public CLBs/IPs manage the external network bandwidth or traffic resources.

### Note:

For details about how to check your account type, refer to [Checking Your Account Type](#).

## Billing Items

EIP fees consist of **IP resource fees** and **public network fees**. Bill-by-CVM and bill-by-IP accounts are billed as follows:

### Bill-by-CVM Accounts

Bill-by-CVM accounts only incur IP resource fees. Public network fees are billed on CVM instances.

When the EIP has not been bound with cloud resources: the EIP only charges [IP resource fees](#) by the hour.

When the EIP has been bound with cloud resources: EIP itself does not charge any fees. [Public network fees](#) are charged on CVM instances.

### Bill-by-IP Accounts

#### Note :

The monthly subscription sales mode for this product is currently in beta testing. The pricing documentation is provided for reference purposes only, and the final price will be determined by the invoice. Should you require further assistance, [Contact our sales team](#).



Bill-by IP accounts have the following billing modes, with costs as follows:

Bill-by-traffic: charges public network fees and IP resources fees.

When the EIP has not been bound with cloud resources: the EIP only charges [IP resource fees](#) by the hour and does not charge public network fees.

When the EIP has been bound with cloud resources: the EIP only charges [public network fees](#).

Monthly subscription: Only the [Public Network Fees](#) are charged.

BWP: charges public network fees and IP resource fees.

When the EIP has not been bound with cloud resources: the EIP only charges [IP resource fees](#) by the hour and does not charge public network fees.

When the EIP has been bound with cloud resources: the EIP only charges [public network fees](#).

## IP Resource Fees

### Billing Period

IP resource fees are pay-as-you-go on an hourly billing cycle.

IP resource fees are billed starting from when you apply for the EIP. The billing is suspended when the cloud resource is bound, resumed when the cloud resource is unbound, and stopped when the EIP is released. The billing is accurate to the second, and the fees generated for the hour are settled and deducted the next hour. If the cloud resource is unbound and bound multiple times in the same billing cycle, the billing period is the cumulative time that cloud resources spend unbound.

### Billing Formula

IP resource fee = the idle price of the region where the EIP is located in × billing period

### Pricing

Region	Price (USD/Hour)
Chinese Mainland and Jakarta	0.031
Hong Kong (China) Singapore Frankfurt Seoul Toronto Virginia Silicon Valley Bangkok Tokyo Mumbai	0.04

São Paulo

0.03

### Billing Example

Suppose a user with a bill-by-CVM account applied for an EIP in the Guangzhou region between 09:00:00 - 09:59:59 and was bound with CVM after being idle for 15 minutes (900 seconds), then the generated IP resource fee is: 0.031 USD/hour \* (900/3600) hour = 0.00775 USD.

#### Note:

To avoid generating unnecessary IP resource fees, bind the EIP with cloud resources immediately after applying for the EIP and release the EIP immediately after unbinding it from cloud resources.

## Public Network Fees

The public network traffic generated by the EIP will be charged with public network fees. There are two different billing plans: bill-by-traffic and bill-by-bandwidth. For details, see [Public Network Billing](#).

## Overdue

### Accounts Overdue

EIP Binding Status	Overdue Duration < 2h	$2h \leq \text{Overdue Duration} < 2h + 24h$	Overdue Duration $\geq 2h + 24h$
EIP without binding cloud resources	Use normally and continue charging.	Suspend service and stop charging.	EIP will be released.
EIP bound to CVM			EIP will be unbound and released.

### Bound Cloud Resources Overdue

If the resource bound with your EIP is overdue, the EIP will be unbound from the resource, become idle, and incur an idle fee. If you do not need to use the EIP anymore, release it on the console ASAP.

The pricing documentation is provided for reference purposes only, and the final price will be determined by the invoice.

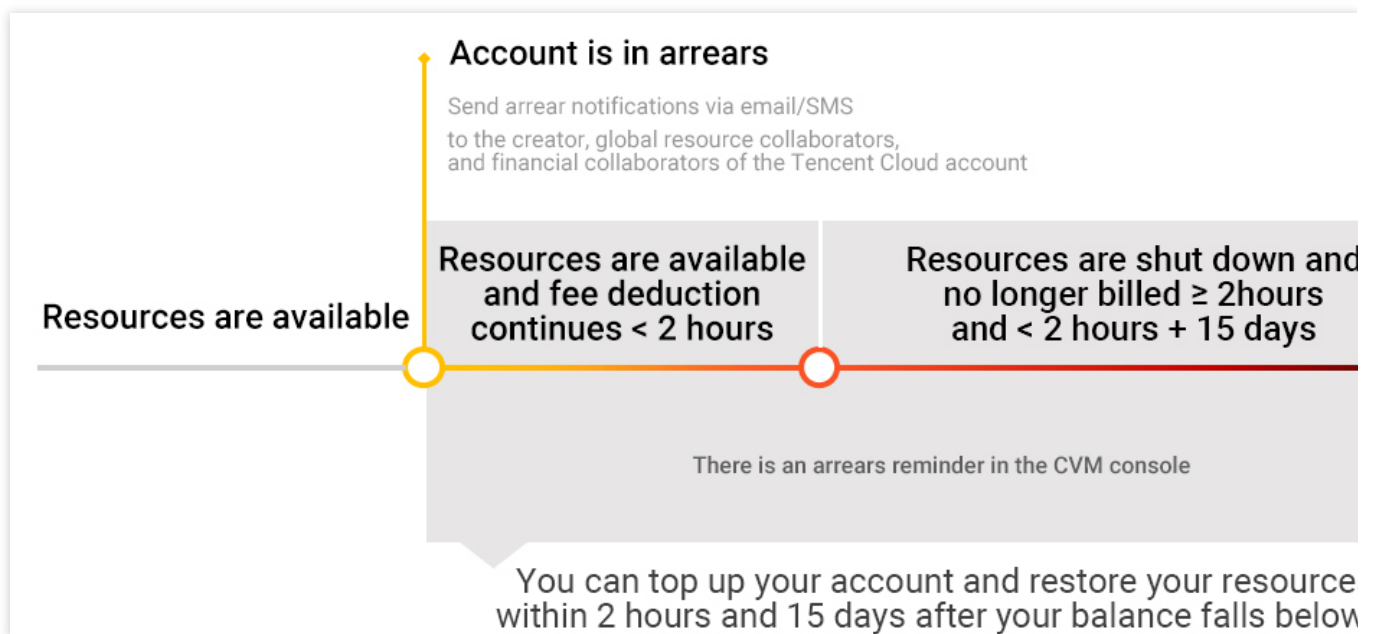
# Payment Overdue

Last updated : 2024-01-08 09:25:40

## Note:

If you are a customer of a Tencent Cloud partner, the rules regarding resources when there are overdue payments are subject to the agreement between you and the partner.

## Pay-as-you-go CVM Instances



## Notes

After you stop using pay-as-you-go resources, **terminate them as soon as possible** to avoid fee deduction.

After a CVM instance is terminated or repossessed, its data will be cleared and cannot be recovered.

Since your actual resource consumption changes constantly, some slight discrepancies may exist for the stated balance in the low balance alert.

## Alerts

Alert Type	Description
Overdue payment reminder	Pay-as-you-go resources are billed on the hour. When your account balance becomes negative, your Tencent Cloud account creator, global resource collaborators, and

	financial collaborators will be notified via email and SMS.
Overdue payment alert	This feature is disabled by default.

## Overdue payment policy

When your account balance falls below zero, you can continue to use CVM instances for the next 2 hours. We will also continue to bill you for this usage. After 2 hours, if your account balance remains negative, your CVM instances will be shut down automatically and the billing will stop.

After automatic shutdown, your CVM instances go through the following stages:

Time Since Shutdown	Description
≤ 15 days	If your account is topped up to a positive balance, the billing resumes and you can continue to use your CVM instances.
	If your account balance remains negative, you will not be able to start your CVM instances.
> 15 days	If your account is not topped up to a positive balance, your pay-as-you-go CVMs will be repossessed. All data will be erased and cannot be recovered. When your CVM is repossessed, Tencent Cloud account creator and all collaborators will be notified via email and SMS.

## Bill-by-traffic Network

Alert Type	Description
Balance alert	Network traffic consumption tends to fluctuate significantly and is difficult to predict. Therefore, we do not offer balance alerts.
Overdue payment alert	When your balance becomes negative, you can continue to use the bill-by-traffic network for the next 2 hours. We will also continue to bill you for this usage. After 2 hours, if your account balance remains negative, the bill-by-traffic network service will automatically stop. After your account is topped up to a positive balance, the service will resume. Check the affected CVM instances and CLB instances and ensure that any previous settings are restored.

### Note:

For information on traffic fees, see [Public Network Billing](#).

# Paying the Difference for Disk Media Type Changes

Last updated : 2024-01-08 09:25:40

Tencent Cloud CVM provides two storage media types for CVM instances, local disk and cloud disk. You can change from using local disks to using cloud disks in the CVM console. The media type change involves price change. You need to pay the price difference (if any) to make the change take effect.

For more information about changing the media type, see [Changing the Disk Media Type](#).

## Paying the difference

When you change from using a local disk to a cloud disk, if the new price is higher than the old one, you need to pay the price difference.

Price difference = [Monthly price difference] x [Remaining days of the subscription] / [(365/12)] x [Applicable discount]

**Monthly price difference:** The difference between the monthly list price of the new and old disk configuration.

**Remaining days of the subscription:** The remaining days between the expiration date and the current date.

**Applicable discount:** The current discount or the discount stated in the Tencent Cloud official website. The lower one applies.

The expiration date of the subscription is not affected by the media type change.

You can pay the price difference by using your trial credit.

### Note:

There is no refund if the new price is lower than the old price.